

## CH. 4.3 INVERSE OF A MATRIX p.234-

IN SQUARE MATRIX NUMBER  
OF ROWS = NUMBER COLUMNS

$2 \times 2$ ,  $3 \times 3$

IDENTITY MATRIX  $\textcircled{I}$  IS  
A SQUARE MATRIX

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

OR  $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

ALL ENTRIES ON  
DIAGONAL ARE  
1'S ALL OTHERS 0'S

$$IA = AI = A$$

$$1 \cdot 7 = 7 \cdot 1 = 7$$

INVERSE MATRIX. MATRIX  
HAS TO BE SQUARE AND  
 $\det \neq 0$ .

$$A \cdot B = I$$

A - MATRIX  
B - INVERSE

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

$\det(ad - bc)$   
determinant

$\det \neq 0$  MATRIX HAS INVERSE

$\det = 0$  MATRIX DOES NOT  
HAVE INVERSE

# HOMWORK

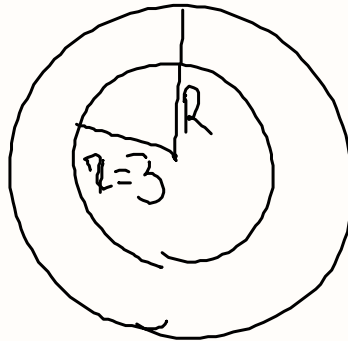
p.239 #10, 12, 16, 18, 22

MEASURING UP p.172 #5, 6

$$A_0 = \pi R^2$$

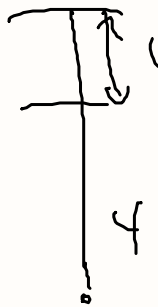
$$A = \frac{(b_1 + b_2)}{2} \cdot h$$

#5



$$R = 4$$

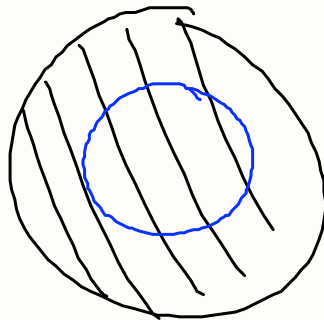
$$r = 3$$

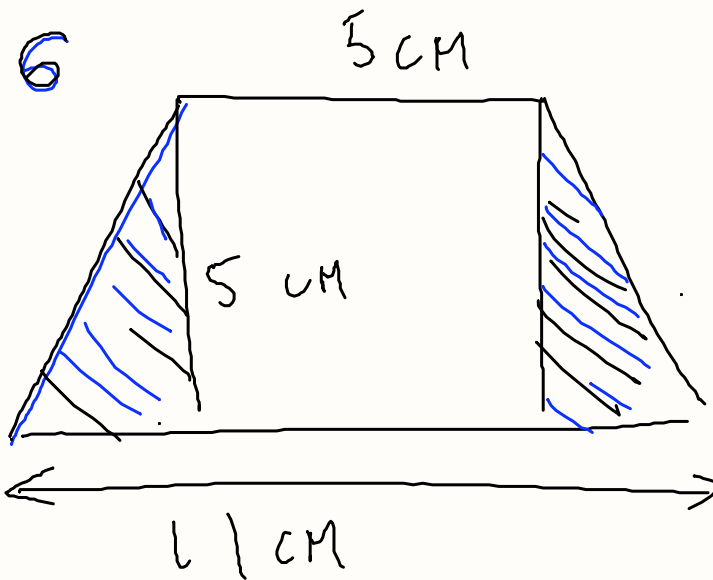


$$A = \pi R^2 = \pi \cdot 16$$

$$A = \pi r^2 = \pi \cdot 9$$

$$16\pi - 9\pi = 5\pi \text{ in}^2$$





SHKD. REGION =

$$40 - 5 \cdot 5 = 15 \text{ cm}^2$$

$$\begin{aligned} A &= \frac{(b_1 + b_2)}{2} \cdot h = \\ &= \frac{(5 + 11)}{2} \cdot 5 = \\ &= \frac{16}{2} \cdot 5 = 8 \cdot 5 = \\ &= 40 \text{ cm}^2 \end{aligned}$$

